ABSTRACT OF THE DISCLOSURE

Elastomer composites are produced by novel continuous flow methods and apparatus in which fluid streams of particulate filler and elastomer latex are fed to the mixing zone of a coagulum reactor to form a mixture in semi-confined flow continuously from the mixing zone through a coagulum zone to a discharge end of the reactor. The particulate filler fluid is fed under high pressure to the mixing zone, such as to form a jet stream to entrain elastomer latex fluid sufficiently energetically to substantially completely coagulate the elastomer with the particulate filler prior to the discharge end. Highly efficient and effective elastomer coagulation is achieved without the need for a coagulation step involving exposure to acid or salt solution or the like. Novel elastomer composites are produced. Such novel elastomer composites may be cured or uncured, and combine material properties, such as choice of filler, elastomer, level of filler loading, and macro-dispersion, not previously achieved.